AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Canceled)

2. (Currently Amended) Control method according to Claim [[1]] 34, wherein the said variables are a combination of the parameters Ψ and Δ.

3. (Currently Amended) Control method according to Claim [[1]] 34, wherein the said variables are a combination of trigonometric functions of the parameters Ψ and Δ.

4. (Currently Amended) Control method according to Claim [[1]] 34, wherein the ellipsometric measurement is one with phase modulation.

Claim 5 (Canceled)

6. (Currently Amended) Control method according to Claim [[1]] 34, wherein the ellipsometric measurement is carried out using the "rotating polarizer" method.

7. (Previously Presented) Control method according to Clam 6, wherein the measured variables are tan Ψ and cosΔ.

8. (Currently Amended) Control method according to Claim [[1]] 34, wherein the ellipsometric measurement is a multiwavelength measurement.

9. (Currently Amended) Control method according to Claim [[1]] 34, wherein the reference values form a theoretically determined path.

10. (Currently Amended) Control method according to Claim [[1]] 34, wherein the reference values form an experimentally determined path.

11. (Currently Amended) Control method according to Claim [[1]] 34, wherein the reference values are discrete points corresponding to the instants of fabrication of the thin layers with respect to the time t_0.

12. (Currently Amended) Control method according to Claim [[1]] 34, wherein the path traveled is adjusted by a polynomial of order between 1 and 5.

13. (Currently Amended) Control method according to Claim [[1]] 34, wherein the reference values are determined by measurement, using the succession of the following steps:

- measurement of a known layer on a simple substrate;
- measurement of the same known layer on an industrial substrate;

- measurement of the thin-film structure to be controlled.

14. (Previously Presented) Control method according to Claim 2, wherein the ellipsometric measurement is one with phase modulation.

15. (Previously Presented) Control method according to Claim 3, wherein the ellipsometric measurement is one with phase modulation.

Claim 16. (Canceled)

Claim 17. (Canceled)

18. (Previously Presented) Control method according to Claim 2, wherein the ellipsometric measurement is carried out using the "rotating polarizer" method.

19. (Previously Presented) Control method according to Claim 3, wherein the ellipsometric measurement is carried out using the "rotating polarizer" method.

20. (Previously Presented) Control method according to Claim 18, wherein the measured variables are tan Ψ and cos Δ.

21. (Previously Presented) Control method according to Claim 19, wherein the measured variables are tan Ψ and cos Δ.

22. (Previously Presented) Control method according to Claim 2, wherein the ellipsometric measurement is a multiwavelength measurement.

23. (Previously Presented) Control method according to Claim 3, wherein the ellipsometric measurement is a multiwavelength measurement.

24. (Previously Presented) Control method according to Claim 2, wherein the reference values form a theoretically determined path.

25. (Previously Presented) Control method according to Claim 3, wherein the reference values form a theoretically determined path.

26. (Previously Presented) Control method according to Claim 2, wherein the reference values form an experimentally determined path.

27. (Previously Presented) Control method according to Claim 3, wherein the reference values form an experimentally determined path.

28. (Previously Presented) Control method according to Claim 2, wherein the reference values are discrete points corresponding to the instants of fabrication of the thin layers with respect to the time t_0.

29. (Previously Presented) Control method according to Claim 3, wherein the reference values are discrete points corresponding to the instants of fabrication of the thin layers with respect to the time t_0.

30. (Previously Presented) Control method according to Claim 2, wherein the path traveled is adjusted by a polynomial of order between 1 and 5.

31. (Previously Presented) Control method according to Claim 3, wherein the path traveled is adjusted by a polynomial of order between 1 and 5.

32. (Previously Presented) Control method according to Claim 2, wherein the reference values are determined by measurement, using the succession of the following steps:

- measurement of a known layer on a simple substrate;
- measurement of the same known layer on an industrial substrate;
- measurement of the thin-film structure to be controlled.

33. (Previously Presented) Control method according to Claim 3, wherein the reference values are determined by measurement, using the succession of the following steps:

- measurement of a known layer on a simple substrate;
- measurement of the same known layer on an industrial substrate;
- measurement of the thin-film structure to be controlled.

34. (New) A method for real-time control of the fabrication of a thin-film structure by ellipsometric measurement, said method comprising:

(a) reflecting a polarized beam of light from a surface of said structure;

(b) measuring the variables I_s and I_c of the reflected beam where $I_s=(\sin 2\Psi \sin\Delta)$ and $I_c=(\sin 2\Psi \cos\Delta)$ or $\cos 2\Psi$; and

c) comparing the trajectory of the obtained variables with the theoretical trajectory of a desired structure,

wherein the said comparison involves the length of the path traveled by said polarized beam of light at a time t in a plane of the variables with respect to an initial point at time t_o for each layer in the thin-film structure.